

## ABSTRACT OF THE DISCLOSURE

A defect detection method and system which can provide a precise determination of whether an object is acceptable

5 without being affected by the position of placement and the rotational orientation of the object. An arc circumscribing the tip of modules of a sprocket is determined. Then, each overlapping region is extracted which is formed by an overlapping portion between an inner portion of a region

10 defined by the arc and the cut-away portion of the sprocket. The area of each overlapping region is determined and compared with each other. In accordance with a determination of whether each area difference falls within the predetermined range of criteria  $\epsilon$ , it is determined whether

15 a chipped portion exists on the tip of module. If there is a chipped portion on the tip of module, two or more overlapping regions are integrated with each other to form a larger overlapping region, thereby making it possible to determine easily and positively the presence of a chipped portion on

20 the tip of module.

2025 RELEASE UNDER E.O. 14176